

CLAIMS

1. A solid state laser pumping module including a plate-shaped thin solid state laser medium, a reflecting surface arranged on a plane surface of said thin solid state laser medium, a cooling means bonded to said reflecting surface, a pumping source for providing pumping light to said thin solid state laser medium, laser light being incident upon a laser light incidence surface which is opposite to said reflecting surface, characterized in that said thin solid state laser medium is a plate whose at least a part on a side of said reflecting surface has an active material doped thereinto, a plate-shaped non-doped medium is disposed on another plane surface of said thin solid state laser medium which is opposite to said plane surface of said thin solid state laser medium on which said reflecting surface is disposed, and said two plates are optically bonded to each other.

2. The solid state laser pumping module according to Claim 1, characterized in that said module has a pumping surface via which the pumping light is introduced into a side surface of said plate-shaped thin solid state laser medium, and said pumping light propagates through said thin solid state laser medium and pumps said thin solid state laser medium while being reflected between said reflecting surface disposed on said thin solid state laser medium and said laser light incidence surface.

3. The solid state laser pumping module according to Claim 2, characterized in that said pumping surface is formed at a certain angle with respect to a direction of normal to said

reflecting surface, and the pumping light emitted out of said pumping source has an optical axis which is substantially parallel to the normal to said pumping surface.

5 4. The solid state laser pumping module according to Claim 2, characterized in that either of diffusion bonding, optical contact, and a ceramic manufacturing means is used as a means for bonding the plate whose at least a part on a side of said reflecting surface has an active material doped thereinto to the plate-shaped
10 non-doped medium disposed on the other plane surface of said thin solid state laser medium which is opposite to said plane surface of said thin solid state laser medium on which said reflecting surface is formed.

15 5. The solid state laser pumping module according to Claim 1, characterized in that the plane surfaces of said thin solid state laser medium are inclined with respect to each other.

6. The solid state laser pumping module according to Claim
20 1, characterized in that a plurality of said pumping surfaces are arranged on a side surface of said thin solid state laser medium, and a plurality of pumping sources for outputting pumping light to said plurality of pumping surfaces, respectively are arranged.

25 7. The solid state laser pumping module according to Claim 1, characterized in that said active material of said thin solid state laser medium is Yb.